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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,288	09/24/2001	Kenneth E. Knapp	RR-1717	9649

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EXAMINER

OMETZ, DAVID LOUIS

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,288

Applicant(s)

KNAPP ET AL.

Examiner

David L. Ometz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 23-26 is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Bharthulwar (US Pat 5847904). Bharthulwar shows an electromagnetic device in figures 3A-3B that has: a plurality of adjoining active layers (GMR or SV layers, see col. 7, lines 20-21) disposed over a substrate. With regard to the claimed process steps involving the first and second mask layers, a "product by process" claim is directed to the product per se, no matter how actually made, see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3, CCPA, 5/27/76); *In re Brown*, 173 USPQ 685 (CCPA, 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Therefore, since independent claim 17 is a product claim, the claimed first and second mask layers involved in the intermediate processing of the sensor are not given patentable weight.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharthulwar (US Pat 5847904) in view of Hamakawa et al (US Pat 6515837). Bharthulwar shows an electromagnetic device in figures 3A-3B that has: a solid body having a leading end separated from a trailing end in a lengthwise direction, a media-facing surface separated from a non-media-facing surface in a heightwise direction, and a pair of sides separated from each other in a widthwise direction, a plurality of adjoining sensor layers (GMR or SV) extending adjacent to said media facing surface, a pair of serpentine, wineglass shaped electrically conductive leads 74,76 (magnetic when including longitudinal biasing layers 66,68) disposed adjacent to said media facing surface and separated from each other by a track width "TW", at least one of said leads having a height measured in said heightwise direction, wherein said lead height measured at a first location (fig. 3A, far outer edges of leads 74, 76) that is distal to said track width is at least twice (4 times, cl. 12) said lead height "h" measured at a second location that is adjacent to said track width "TW". However, Bharthulwar is silent as to the TW width (cl. 10, a range between .25 microns and 1 nm).

Hamakawa et al shows an MR head in figure 1 that has a track width of 0.28 microns defined between the leads 16 (see col. 8, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the track width of Bharthulwar a submicron width (0.25 microns) as doing this would permit reading of narrow tracks, thus improving the storage capability of the overall storage device by improving the recording density of storage.

5. Claims 1-9, 23-26 are allowed.

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6. Applicant's arguments filed 2/23/04 and attached to paper number 7 have been fully considered but are deemed moot in view of the new grounds of rejection to Hamakawa et al based upon Applicant's track width amendment to claim 10. However, claim 17 stands at issue and will be addressed. Applicant asserts with regard to claim 17 that there are no process steps included, while also maintaining that "Bharthulwar does not disclose the mask layers recited in claim 17." However, the examiner maintains that claim 17 is a product claim directed to an electromagnetic device. The mask layers are not included in the final product (mask layers 207,208 are removed during the processing steps, see paragraphs 37-39 of Applicant's disclosure). Therefore, the mask layers are inherently part of process steps which form the final product. A "product by process" claim is directed to the product per se, no matter how actually made (i.e. made by the use of mask layers during the processing steps) and the patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process steps involved.

7. Applicant's amendment to claim 10 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Ometz whose telephone number is (703) 308-1296.

The examiner can normally be reached on M-W, 6:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Ometz
Primary Examiner
Art Unit 2653

DLO
5/5/04